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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/913,905 | 01/23/2002 | Colin Ramshaw | A01205US | 7363 |

22920 7590 12/21/2005

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EXAMINER

BHAT, NINA NMN

ART UNIT PAPER NUMBER

1764

DATE MAILED: 12/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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| ART UNIT | PAPER |
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Commissioner for Patents

This case remains allowed. Original Claim 7, now numbered Claim 5, depended on itself and now depends correctly from Claim 1.

N. Bhat
Primary Examiner
Art Unit: 1764

Art Unit: 1764

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:


In the Claims:

Claim 5 (Original Claim 7), line 1, delete "claim 5" and insert --claim 1--

2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to N. Bhat whose telephone number is 571-272-1397. The examiner can normally be reached on Monday-Friday, 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on 571-272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


N. Bhat
Primary Examiner
Art Unit 1764

to heat the rotating element in the form of radiant or heating means may be provided to heat the rotating element in the form of radiant or other heaters positioned on the face of the rotating element which does not comprise the rotating surface for conversion. Preferably, radially spaced, generally circular radiant heaters are provided.

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Any preferred cooling or quenching means may be provided in a suitable position to cool the reacted substrate. For example cooling coils or a heat sink may provide cooling by heat exchange, or a reservoir of quench may provide cooling or reaction termination by intimate mixing in the collection means.

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In some embodiments, one of the reactants may be a liquid phase component and another may be a gaseous phase component. In these embodiments, the rotating support member is advantageously contained within a vessel so as to allow the concentration of the gaseous phase component in the vicinity of the surface to be controlled. The liquid component may be fed to the surface of the disc as described above, and the gaseous component supplied to the vessel. A rotary impeller or fan or similar device may be mounted close to the rotating surface and driven so as to suck the gaseous phase component from a region surrounding the periphery of the rotating surface towards the centre of the rotating surface while the liquid phase component travels from the centre of the surface towards its periphery due to the rotation of the rotating surface. Where, for example, the support element is a disc, the impeller or fan may take the form of a generally disc shaped structure mounted coaxially with the support element and close thereto. A surface of the impeller or fan facing the rotating surface of the support element may be provided with blades or vanes such that rotation of the impeller or fan serves to suck the gaseous phase component from a periphery of the surface and the impeller or fan towards the centre of the surface. By providing a counter-current flow of the gaseous and liquid phase components, heat or mass transfer between the components is much improved, since the concentration of unreacted liquid phase reactant is lowest at the periphery of the disc, and therefore benefits from a high concentration of the gaseous phase component so as to ensure full reaction.

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In all the embodiments described above, it may be advantageous to arrange for the heat transfer fluid to change phase during its application to the second surface. This may be achieved by supplying the heat transfer fluid in a given phase, and maintaining a vapour pressure in the region of the second surface so as to promote phase change and to make use of the additional heat transfer available upon any

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